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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,958	02/09/2004	Richard F. Foulke	1780.2001-005	3851

21005 7590 09/17/2004

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EXAMINER

TRAN, KHOI H

ART UNIT PAPER NUMBER

3651

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,958

Applicant(s)

FOULKE ET AL.

Examiner

Khoi H Tran

Art Unit

3651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

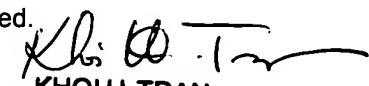
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


KHÔI H. TRAN
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over respective claims 1-23 of U.S. Patent No. 6,690,993. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious for one of ordinary skill in the art to broaden the patented claims, by removing selected elements therein, to anticipate the instant claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-6 and 12-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Salazar et al. 6,301,522.

Salazar ' 522 discloses a control system and method of controlling a robot per claimed invention. The system comprises a controller for controlling the drive system for driving a robot. The controller calculates a profile of a command motion, in sections, before said motion is performed. When the controller determines that said motion is capable of being performed, the motion is then executed. The controller recalculates said profile until the controller determines that said motion is capable of being performed. The trajectory of said motion is calculated taking into account parameters including acceleration, jerk, and velocity along multiple axes.

5. Claims 1-7 and 12-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Lucas 6,002,971.

Lucas '971 discloses a control system and method of controlling a robot per claimed invention (Figures 1-5). The system comprises a controller for controlling the drive system for driving a robot. The controller calculates a profile of a command

motion, in sections, before said motion is performed. When the controller determines that said motion is capable of being performed, the motion is then executed. The controller recalculates said profile until the controller determines that said motion is capable of being performed. The trajectory of said motion is calculated taking into account parameters including acceleration, jerk, and velocity along multiple axes. The system comprises gripper arm for gripping articles and gripper arm drive for driving the gripper arm.

6. Claims 1-8 and 12-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Dimitri et al. 6,351,685.

Dimitri '685 discloses a control system and method of controlling a robot per claimed invention (Figures 1-16B). The system comprises a controller for controlling the drive system for driving a robot. The controller calculates a profile of a command motion, in sections, before said motion is performed. When the controller determines that said motion is capable of being performed, the motion is then executed. The controller recalculates said profile until the controller determines that said motion is capable of being performed. The trajectory of said motion is calculated taking into account parameters including acceleration, jerk, and velocity along multiple axes. Dimitri '685 system comprises gripper arm for gripping articles and gripper arm drive for driving the gripper arm. Dimitri '685 system comprises a vertical column mounted on a moving carriage and a vertical drive to move the gripper arm vertically along said vertical column (Figure 1). Dimitri '685 carriage comprises a bottom drive.

7. Claims 1-7 and 12-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Bancroft et al. 6,658,324.

Bancroft '324 discloses a control system and method of controlling a robot per claimed invention (Figures 1-7). The system comprises a controller for controlling the drive system for driving a robot. The controller calculates a profile of a command motion, in sections, before said motion is performed. When the controller determines that said motion is capable of being performed, the motion is then executed. The controller recalculates said profile until the controller determines that said motion is capable of being performed. The trajectory of said motion is calculated taking into account parameters including acceleration, jerk, and velocity along multiple axes. The system comprises gripper arm for gripping articles and gripper arm drive for driving the gripper arm.

8. Claims 1-6 and 12-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Xu et al. 6,662,067.

Xu '067 discloses a control system and method of controlling a robot per claimed invention. The system comprises a controller for controlling the drive system for driving a robot. The controller calculates a profile of a command motion, in sections, before said motion is performed. When the controller determines that said motion is capable of being performed, the motion is then executed. The controller recalculates said profile until the controller determines that said motion is capable of being performed. The trajectory of said motion is calculated taking into account parameters including acceleration, jerk, and velocity along multiple axes.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 9, 10, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitri et al. 6,351,685 in view of Dimitri et al. 6038,490.

Dimitri '685 discloses all elements per claimed invention as indicated in paragraph 6 above. However it is silent as to the specifics of a rotating vertical column to which the gripper arm is movably mounted.

Dimitri '490 discloses of a robot gripper system. Dimitri '490 shows that vertical threaded shaft to the right of element 52 (Figure 4) provides vertical movement for the gripper arm. When the threaded shaft rotates, the gripper arm 55 is actuated to move up or down depends on the direction of rotation.

It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided rotating threaded shaft to Dimitri '685 gripper arm assembly because it facilitates vertical movement for the gripper arm, as taught by Dimitri '490.

11. Claims 11 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitri et al. 6,351,685 in view of Dimitri et al. 6038,490 as applied to claims 10 and 22 above, and further in view of Kishi et al. 5,426,581.

Dimitri '685 modified system discloses all elements per claimed invention as indicated in paragraph 10 above. However it is silent as to the specifics of a vision system for verifying the position of the robot.

Kishi '581 discloses a robot gripper system. Kishi '581 teaches that camera is often used to verify and calibrate the position of gripper arm.

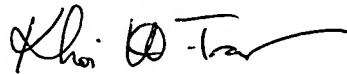
It would have been obvious for a person with ordinary skill in the art, at the time the invention was made, to have provided to Dimitri '698 gripper assembly with a camera system because it facilitates means to verify and calibrate gripper arm assembly, as taught by Kishi '581.

12. Additional references made of record and not relied upon are considered to be of interest to applicant's disclosure: see attached USPTO Form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoi H Tran whose telephone number is (703) 308-1113. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (703) 308-1113. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Khoi H Tran
Primary Examiner
Art Unit 3651

KHT
09/16/2004